Amended claims

1. Method for transmission of software for a performance characteristic to be installed on a terminal on demand, from a server (20) to the terminal (10) in a packet network (50),
characterized in that,
triggered by the activation of the performance characteristic as a precondition for the transmission, a bandwidth test is carried out to determine whether the present available bandwidth is sufficient for transmission of the demanded software within a specified time limit and in response to a negative test result from this bandwidth test the server (20) does not transmit the requested software.

Claims

1. Method for transmission of software and/or data on demand, from a server (20) to the terminal (10) in a packet network,
characterized in that,
as a precondition for the transmission, a bandwidth test is carried out to determine whether the present available bandwidth is sufficient for transmission of the demanded software or data and
in response to a negative test result from this bandwidth test the server (20) does not transmit the requested software or data.

2. Method in accordance with claim 1,
characterized in that
the packet network (50) is an IP-based telecommunication network.

3. Method in accordance with claim 1 or 2,
characterized in that
the software is a performance characteristic that is demanded as required by the terminal (10).

4. Method in accordance with one of claims 1 to 3,
characterized in that
a required bandwidth is calculated according to a specified upper limit for the loading time of the software or data.

5. Method in accordance with one of claims 1 to 4,
characterized in that
information regarding the required bandwidth is part of the request and thus made available by the terminal (10).

6. Method in accordance with one of claims 1 to 5, characterized in that
information regarding the required bandwidth is part of the requested data or requested software and thus made available by the server (20).

7. Method in accordance with one of claims 1 to 6, characterized in that
the bandwidth test then only provides a positive test result if the bandwidth is sufficient for a realtime or quazi-realtime application.

8. Method in accordance with one of claims 1 to 7 characterized in that
the information on the available bandwidth is made available by a network resource manager (40), with this information being updated in particular periodically or on request by the server (20).

9. Method in accordance with claim 8, characterized in that
the network resource manager (20) manages priorities for all network resource demands and in the event of a negative test result from the bandwidth test performs the following steps:

- Determination of the demand difference between required and existing network resources for the transmission,
- Seeking one or more processes with lower priorities than the demand, the added network resources of which correspond to, or exceed, the demand difference and
- If the search is successful, allocating limitations of network resources to the sought process until

complete freezing, so that the added limitations correspond at least to the demand difference.

10. Method in accordance with one of claims 1 to 9, characterized in that
in the event of a negative test result of the bandwidth test a message is sent to the terminal (10), whereby the message can contain one of the two following rejections.
- A temporary rejection of the demand with it being possible for succeeding similar demands to be generated and successfully answered.
- A permanent rejection of the demand, whereby succeeding equal demands cannot be generated or are immediately answered with a further permanent rejection without further process steps.

11. Method in accordance with claim 10, characterized in that
the message is shown to the user of the terminal (10), especially in that the option for the request that led to the message is marked or made inaccessible.

12. Method in accordance with claim 10 or 11, characterized in that
a renewed loading inquiry is generated in response to a temporary rejection.

13. Method in accordance with one of claims 10 to 12, characterized in that
a permanent rejection is generated by one of the following steps.
- A single or repeated temporary rejection.
- Comparison of the required bandwidth with the maximum available bandwidth.

14. Server (20) that has a performance characteristic providing device (31) for access to a performance characteristic memory (32) for storing software and/or data and an available-bandwidth memory (42) for storing bandwidth data for connections to terminals (10), with the performance characteristic providing device (31) having an interface to at least one terminal (10), through which the software and/or data can be transmitted to the terminal,
characterized in that
the performance characteristic providing device (31) has at least indirect access to the available-bandwidth memory (42) and thus, when there is a loading inquiry at the interface, can carry out a broadband test to determine whether to transmit the data and/or software in accordance with the loading inquiry if the result of the bandwidth test is positive or to send a rejection message if the test result is negative.

15. Server (20) in accordance with claim 14,
characterized in that
in addition a bandwidth demand memory (33) for storing the required bandwidth for a performance characteristic is connected to the performance characteristic providing device (31) in such a way that the performance characteristic providing device (31) can determine for carrying out the broadband test which bandwidth requires a transmission of data and/or software in accordance with a loading inquiry for a performance characteristic.

16. Server (20) in accordance with claims 14 or 15,
characterized in that
the performance provider (31) has access to a maximum-bandwidth memory (43) for storage of the maximum

available bandwidth for connection to terminals (10), in order to perform an additional or alternative broadband test using the maximum available bandwidth.

17. Server (20) in accordance with one of claims 14 to 16, characterized by
a network resource allocation device (41) that is connected to the performance characteristic providing device (31) and has access to the available-bandwidth memory (42), whereby the network resource allocation device (41) can allocate or reject network resources to the loading inquiry and accordingly update the available-bandwidth memory (42).

18. Server (20) in accordance with claim 17
characterized in that
the network resource allocation device (41) is connected to a network resource test device (46) that has access to the available-bandwidth memory (42) and at least one connection to a terminal (10), in order to determine and store current bandwidth data.

19. Server (20) in accordance with claims 17 or 18,
characterized in that
the network resource allocation device (41) has access to a network resource allocation memory (44) that stores data on bandwidths allocated via processes, and priorities of these processes, with the network resource allocation device (41) being able to redistribute network resources depending on the priorities of the process and the loading inquiry, in order to make sufficient bandwidth available to the loading inquiry.

20. Server (20) in accordance with one of claims 14 to 19,.
characterized in that

the network resource allocation device has access to a network resource inquiry memory that stores data on the requested bandwidths, in order to manage processes to which no bandwidth is at present allocated.

21. Terminal (10) for data processing in a packet network (50) with a server (20) in accordance with one of claims 14 to 20, that has a user interface (11) that presents a choice of performance characteristics, and has a performance characteristic loading device (12), that is at least indirectly connected via the network (50) to the server (20),
characterized in that
the user interface (11) for actual display of the choice of performance characteristics is designed in such a way that after rejection of a loading inquiry for a performance characteristic by the server (20) the requested performance characteristic is highlighted or omitted.

22. Terminal (10) in accordance with claim 21,
characterized in that
a performance characteristic is highlighted in the display after a temporary rejection by the server (20) and is not shown after a permanent rejection.

23. Network arrangement (150) with at least one server (120), in accordance with one of claims 14 to 20 and at least one terminal (110a-110d) in accordance with claim 21 or 22.